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The Editorial Notebook

The Lesson of the Poisoned Urals

While Americans argue over the odds of a nuclear accident, the Russians already know what such an accident can be like. They apparently suffered one more than two decades ago — an explosion of nuclear wastes at a weapons production complex in the Ural Mountains.

The incident was first revealed in 1976 by Zhores Medvedev, an exiled Soviet geneticist living in London. His story was promptly denounced as a fraud by Western nuclear and intelligence experts who noted, correctly, that it was based on rumors. Yet everything learned since suggests that Dr. Medvedev was essentially right.

Discovering the truth has required scientific detective work. Superficial confirmation came quickly: other exiles said they knew of a large area in the Urals contaminated by radioactivity. Documents pried loose from the C.I.A. by Ralph Nader reported rumors of major accidents at a secret weapons complex there. Then Dr. Medvedev, determined to clear his reputation, combed through Russian scientific journals and found scores of articles about heavy radioactive contamination of land, water, plants and animals. He deduced that they actually described the aftermath of an explosion of nuclear waste that killed hundreds, hospitalized thousands and poisoned hundreds of square miles.

Nuclear Accidents Really Can Contaminate Large Areas

Experts still disagree with him over the cause and extent of the accident. But two recent studies by American laboratories confirm that the Ural accident almost certainly occurred. One argues (rather implausibly) that the area was contaminated by fallout from a nuclear weapons test in the faraway Soviet Arctic. The other, conducted by environmental scientists at the Oak Ridge National Laboratory, agrees with Dr. Medvedev that nuclear waste was the problem.

It suggests that a powerful chemical explosion ruptured one or more waste storage tanks, spewing a radioactive plume 40 or more miles in one direction and releasing liquids that contaminated lakes and rivers in another. At least 40 square miles were poisoned, and perhaps 400 square miles were affected. A comparison of maps made before and after the accident indicates that the Soviets evacuated some 30 small communities and built a reservoir and canal system to hold back contaminated water.

How many people died is uncertain. Dr. Medvedev had cited reports of thousands, dead or injured; the Oak Ridgers doubt there were severe injuries beyond the site of the accident.

Is any of this relevant to America's nuclear safety debate? The waste storage techniques that blew up on the Russians have apparently never been used here. Nor, almost certainly, did the accident involve reactors, the chief concern here after Three Mile Island. Yet the scientists at Oak Ridge do not completely dismiss the accident as a freak, with no chance of recurring.

Radioactive discharges *can* contaminate large areas and require long evacuations and vast engineering projects to limit the damage. The accident in the Urals thus underscores the wisdom not only of careful emergency planning but also of locating any future nuclear facilities — whether civilian reactors or weapons factories — far enough out in the hinterland that no accident can do much damage.

The C.I.A. knows more than it has revealed about the accident; it could assist emergency planning by releasing the pertinent documents. But only the Soviets know exactly what happened and which corrective measures worked best. Their knowledge, which could help other nations avoid a similar disaster, is worth bargaining for.

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